FORM MS–5226–3C–2/27/2003
FILE IN SECT. 2 OF SERVICE MANUAL

$1.50 **THE WORLD FORMULA RACING ENGINE**

Illustrated Parts List
Motorsports
Model Series

MOTOR SPORTS

124435

TYPE NUMBER
8101.

⚠ WARNING: ⚠

- **MODEL 124435–8101–01 IS A RACING ENGINE**
- **SPECIAL SKILLS AND KNOWLEDGE ARE REQUIRED TO PREPARE THE ENGINES FOR COMPETITIVE USE. IF YOU ARE NOT FAMILIAR WITH THE PROPER TECHNIQUES AND PROCEDURES, HAVE QUALIFIED INDIVIDUALS DO THE WORK FOR YOU**
- **THE ENGINES DO NOT HAVE GOVERNORS. ANY THROTTLE MECHANISM MUST HAVE A RETURN–TO–IDLE SPRING SO THE ENGINE WILL RETURN TO IDLE SPEED WHEN THE THROTTLE PEDAL IS RELEASED**

FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS PERSONAL INJURY OR DEATH

TO FIND
THE CORRECT NUMBER OF THE PART YOU NEED:
FOLLOW THE INSTRUCTIONS ON THE REVERSE SIDE

A. Refer to Engine Model, Type and Code Number that is stamped on the blower housing of engine. Engine type numbers such as 0123 01 are listed only as 0123 in most instances. The two digits (01 or 02, etc.) to the right of the space may be required for more accurate parts identification in some instances. Select the Illustrated Parts List covering the correct Model Series and Type Number.

B. Refer to the Illustrations and compare the original part with Illustration. The number next to the illustration is the Reference Number. Assemblies include all parts shown in frames. All parts shown in assembly frames having individual reference numbers can be purchased separately.

C. After the Reference Number has been identified, refer to the Numerical text, where Reference and Primary Part Number are listed. THE PRIMARY PART IS USED ON ALL TYPE NUMBERS EXCEPT THOSE TYPE NUMBERS UNDER “NOTE.”

D. If a “Note” appears below the Primary Part Number, it means that this part differs from the Primary Part for certain types. If your Type number is listed under “Note,” order the part referred to at the “Note.”

E. If your Engine Type Number does not appear after any part number listed under “Note,” use the Primary Part Number.

F. For Engine Type Numbers not covered by this book, check other Parts Lists having the same engine model or contact your source of supply.

PRINTED IN U.S.A.

BRIGGS & STRATTON ®

COPYRIGHT by BRIGGS & STRATTON CORPORATION
All rights reserved. No part of this material may be reproduced or transmitted, in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system, without permission in writing from Briggs & Stratton Corporation.

BEFORE OPERATING ENGINE

- Read entire Operating & Maintenance Instructions AND the instructions for the equipment this engine powers.*
- Failure to follow instructions could result in serious injury or death.

THESE INSTRUCTIONS CONTAIN SAFETY INFORMATION TO

- Make you aware of hazards associated with engines
- Inform you of the risk of injury associated with those hazards, and
- Tell you how to avoid or reduce the risk of injury.

The safety alert symbol (⚠) is used to identify safety information about hazards that can result in personal injury.

A signal word (DANGER, WARNING, or CAUTION) is used with the alert symbol to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol may be used to represent the type of hazard.

DANGER
Indicates a hazard which, if not avoided, **will result in death or serious injury.**

WARNING
Indicates a hazard which, if not avoided, **could result in death or serious injury.**

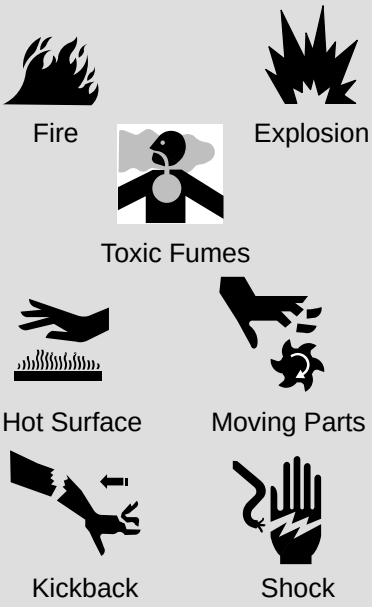
CAUTION
Indicates a hazard which, if not avoided, **might result in minor or moderate injury.**

CAUTION, when used **without** the alert symbol, indicates a situation that **could result in damage to the engine.**

⚠ WARNING ⚠

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

HAZARD SYMBOLS AND MEANINGS



THE INTERNATIONAL SYMBOLS USED ON THE ENGINE OR IN THIS MANUAL INCLUDE:

⚠ WARNING

Engines give off carbon monoxide, an odorless, colorless, poison gas.

Breathing carbon monoxide can cause nausea, fainting or death.

- Start and run engine outdoors.
- Do not start or run engine in enclosed area, even if doors or windows are open.

⚠ WARNING

Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go.

Broken bones, fractures, bruises or sprains could result.

- When starting engine, pull cord slowly until resistance is felt, then pull rapidly.
- Remove all external equipment/engine loads before starting engine.
- Direct coupled equipment components such as, but not limited to, blades, impellors, pulleys, sprockets, etc., must be securely attached.

* Briggs & Stratton does not necessarily know what equipment this engine will power. For that reason, you should carefully read and understand the operating instructions for the equipment on which your engine is placed.

WARNING

Gasoline and its vapors are extremely flammable and explosive.

Fire or explosion can cause severe burns or death.

WHEN ADDING FUEL

- Turn engine OFF and let engine cool at least 2 minutes before removing gas cap.
- Fill fuel tank outdoors or in well-ventilated area.
- Do not overfill fuel tank. Fill tank to approximately 1-1/2 inches below top of neck to allow for fuel expansion.
- Keep gasoline away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.

WHEN STARTING ENGINE

- Make sure spark plug, muffler, fuel cap and air cleaner are in place.
- Do not crank engine with spark plug removed.
- If fuel spills, wait until it evaporates before starting engine.
- If engine floods, set choke to OPEN/RUN position, place throttle in FAST and crank until engine starts.

WHEN OPERATING EQUIPMENT

- Do not tip engine or equipment at angle which causes gasoline to spill.
- Do not choke carburetor to stop engine.

WHEN TRANSPORTING EQUIPMENT

- Transport with fuel tank EMPTY or with fuel shut-off valve OFF.

WHEN STORING GASOLINE OR EQUIPMENT WITH FUEL IN TANK

- Store away from furnaces, stoves, water heaters or other appliances that have pilot light or other ignition source because they can ignite gasoline vapors.

WARNING

Unintentional sparking can result in fire or electric shock.

Unintentional start-up can result in entanglement, traumatic amputation, or laceration.

BEFORE PERFORMING REPAIRS OR ADJUSTMENTS

- Disconnect spark plug wire and keep it away from spark plug.
- Disconnect battery at negative terminal (only engines with electric start).

WHEN TESTING FOR SPARK

- Use approved spark plug tester.
- Do not check for spark with spark plug removed.

WARNING

Running engines produce heat. Engine parts, especially muffler, become extremely hot.

Severe thermal burns can occur on contact.

Combustible debris, such as leaves, grass, brush, etc. can catch fire.

- Allow muffler, engine cylinder and fins to cool before touching.
- Remove accumulated combustibles from muffler area and cylinder area.
- Install and maintain in working order a spark arrester before using equipment on forest-covered, grass-covered, brush-covered unimproved land. The state of California requires this (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal land.

WARNING

Rotating parts can contact or entangle hands, feet, hair, clothing, or accessories.

Traumatic amputation or severe laceration can result.

- Operate equipment with guards in place.
- Keep hands and feet away from rotating parts.
- Tie up long hair and remove jewelry.
- Do not wear loose-fitting clothing, dangling drawstrings or items that could become caught.

WARNING

Starting engine creates sparking.

Sparking can ignite nearby flammable gases.

Explosion and fire could result.

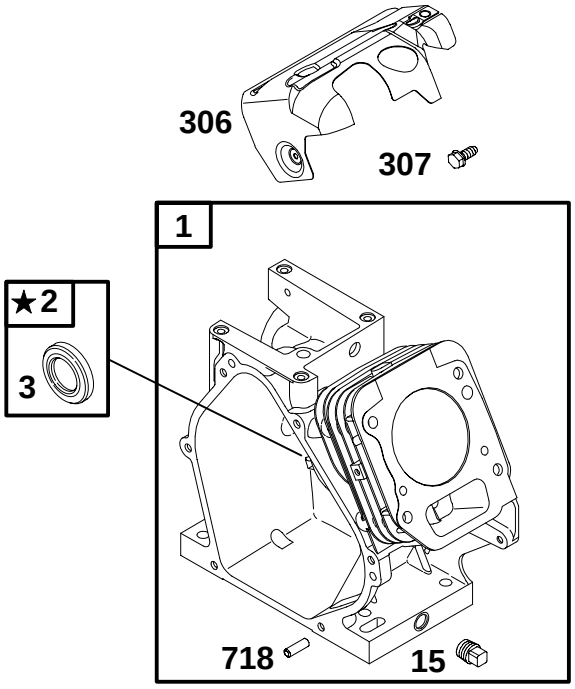
- If there is natural or LP gas leakage in area, do not start engine.
- Do not use pressurized starting fluids because vapors are flammable.

WARNING

Replacement parts for fuel system (cap, hoses, tanks, filters, etc.) must be the same as original parts, otherwise fire can occur.

WARNING

DO NOT strike the flywheel with a hammer or hard object because the flywheel may later shatter during operation.



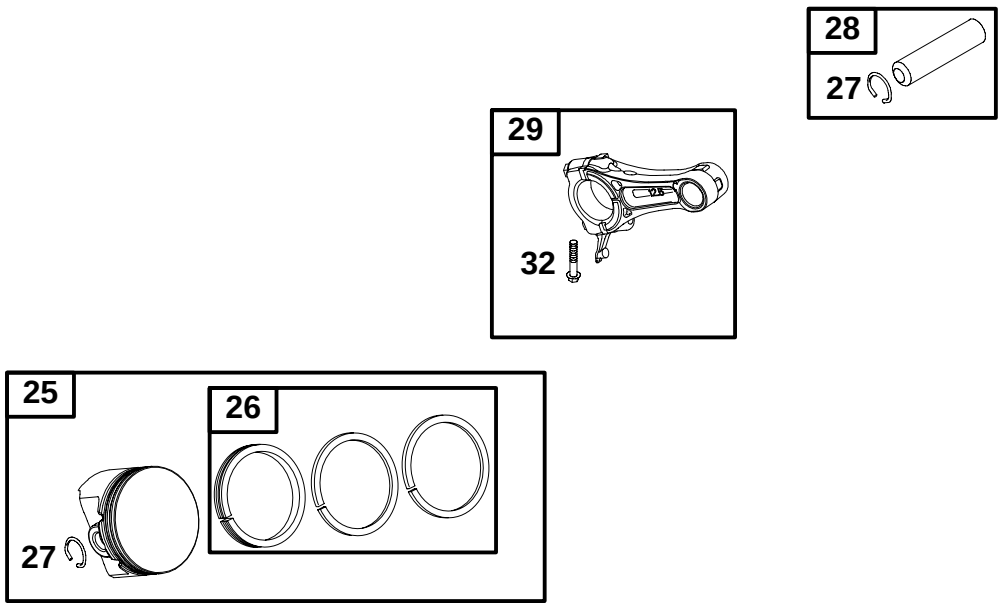
★ **REQUIRES SPECIAL TOOLS TO INSTALL. SEE REPAIR INSTRUCTION MANUAL.**

1019 LABEL KIT

REF. NO.	PART NO.	DESCRIPTION
1	**555582**	Cylinder Assembly
2	**555140**	Kit–Bushing/Seal (Magneto Side)
3	**★555071**	Seal–Oil (Magneto Side)
15	**555079**	Plug–Oil Drain
306	**557037**	Shield–Cylinder
307	**555533**	Screw (Cylinder Shield)
718	**555579**	Pin–Locating
1019	**555577**	Kit–Label

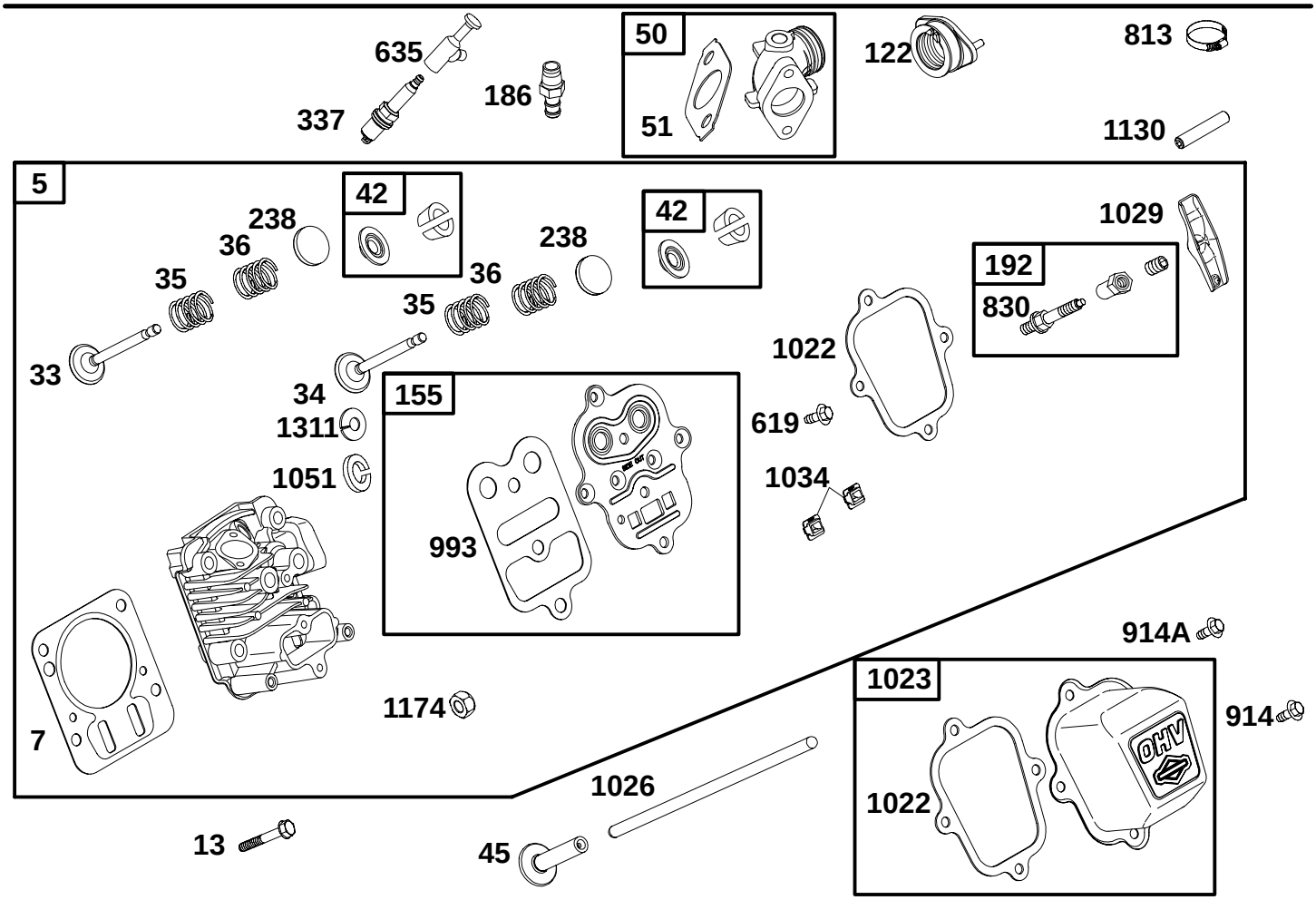
★ Included in Engine Gasket Set–Ref No. 358.
Δ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.

124400



REF. NO.	PART NO.	DESCRIPTION
25	**557001**	Piston Assembly (Standard) **–––––– Note –––––** **557002** Piston Assembly (.010” Oversize) **557003** Piston Assembly (.020” Oversize) **557004** Piston Assembly (.030” Oversize)
26	**555514**	Ring Set (Standard) **–––––– Note –––––** **555515** Ring Set (.010” Oversize) **555516** Ring Set (.020” Oversize) **555517** Ring Set (.030” Oversize)
27	**555521**	Lock–Piston Pin
28	**555520**	Pin–Piston
29	**557005**	Rod–Connecting
32	**557078**	Screw (Connecting Rod)

★ Included in Engine Gasket Set–Ref No. 358.
Δ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.

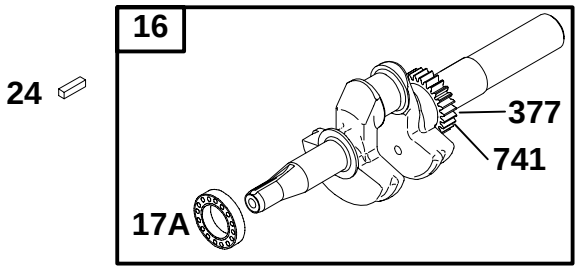


REF. NO.	PART NO.	DESCRIPTION
5	**557011**	Head–Cylinder
7	**★Δ555621**	Gasket–Cylinder Head
13	**555540**	Screw (Cylinder Head)
33	**557018**	Valve–Exhaust
34	**557017**	Valve–Intake
35	**557024**	Spring–Valve (Intake)
36	**557024**	Spring–Valve (Exhaust)
42	**557025**	Keeper–Valve
45	**557038**	Tappet–Valve
50	**557009**	Manifold–Intake
51	**557044**	Gasket–Intake
122	**557050**	Spacer–Carburetor
155	**555547**	Plate–Cylinder Head
186	**557054**	Connector–Hose
192	**555548**	Adjuster–Rocker Arm
238	**557016**	Cap–Valve
337	**557039**	Plug–Spark
619	**555556**	Screw (Cylinder Head Plate)
635	**555162**	Boot–Spark Plug
813	**557051**	Clamp (Intake Manifold)
830	**555549**	Stud (Rocker Arm)
914	**555535**	Screw (Rocker Cover)
914A	**555542**	Screw (Rocker Cover)
993	**★Δ555554**	Gasket–Cylinder Head Plate
1022	**★Δ555523**	Gasket–Rocker Cover
1023	**555528**	Cover–Rocker
1026	**555531**	Rod–Push
1029	**557015**	Arm–Rocker
1034	**555555**	Guide–Push Rod
1051	**557026**	Ring–Retaining
1130	**557052**	Stud (Intake Manifold)
1174	**557013**	Nut (Intake Manifold)
1311	**557014**	Washer (Intake Manifold)

★ Included in Engine Gasket Set–Ref No. 358.
Δ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.

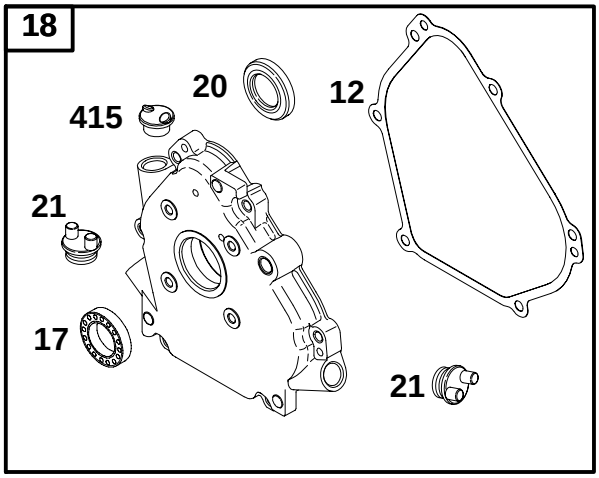
Assemblies include all parts shown in frames.

124400



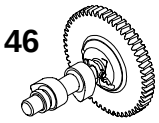
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
16	**555620**	Crankshaft	**24**	**555054**	Key–Flywheel	**741**	**555574**	Gear–Timing
17A	**555573**	Bearing–Ball	**377**	**555049**	Key–Woodruff			

★ Included in Engine Gasket Set–Ref No. 358.
∆ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.



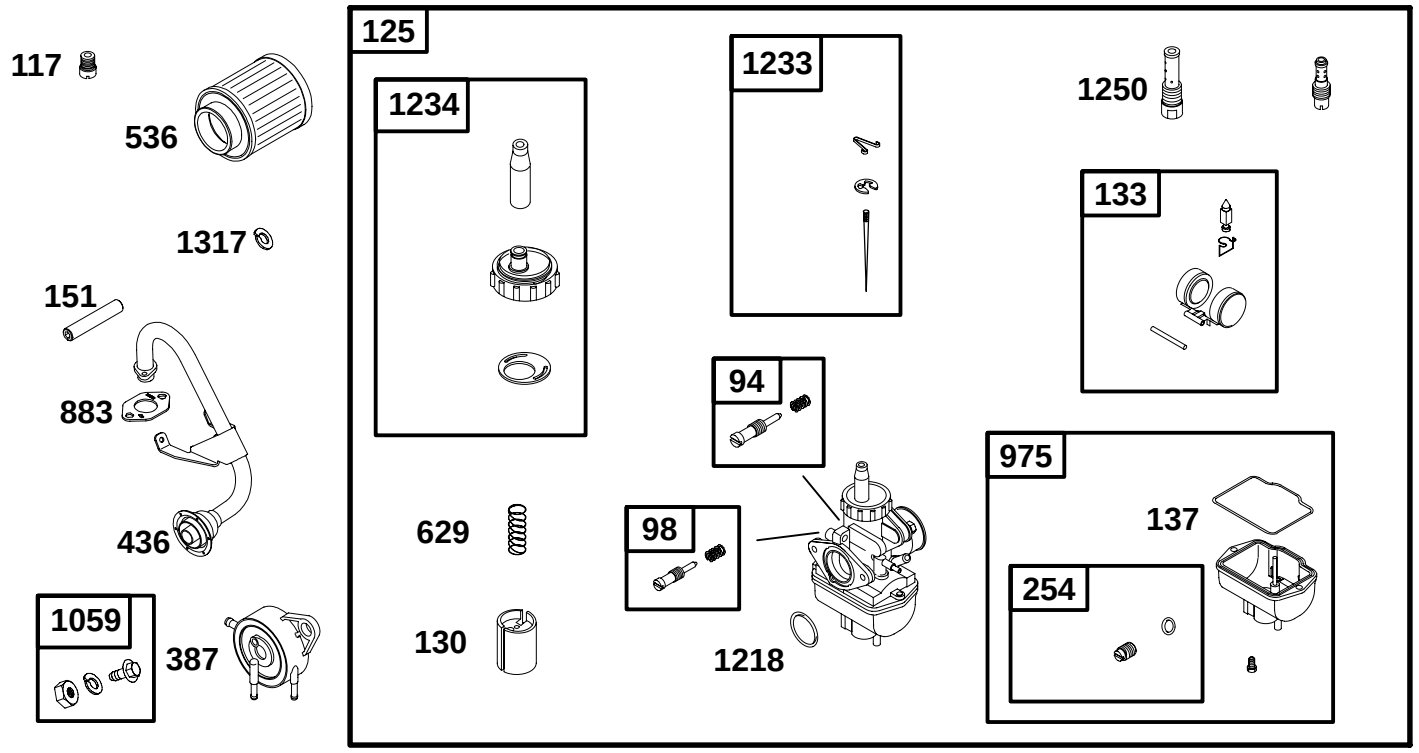
REF. NO.	PART NO.	DESCRIPTION
12	⋆**555525**	Gasket–Crankcase
17	**555527**	Bearing–Ball
18	**555559**	Cover–Crankcase
20	⋆**555529**	Seal–Oil (PTO Side)
21	**555037**	Cap–Oil Fill
22	**557035**	Screw (Crankcase Cover/Sump)
415	**555563**	Plug

⋆ Included in Engine Gasket Set–Ref No. 358.
∆ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.



REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
46	**557041**	Camshaft						

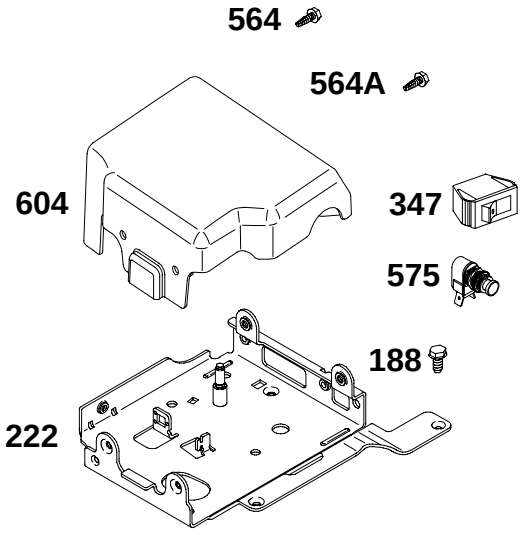
★ Included in Engine Gasket Set–Ref No. 358.
Δ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.



REF. NO.	PART NO.	DESCRIPTION
94	**557085**	Kit–Idle Mixture
98	**557084**	Kit–Idle Speed
117	**557012**	Jet–Main (Gasoline) (Contains 7 Different Sizes)
125	**557006**	Carburetor
130	**557083**	Valve–Throttle
133	**557080**	Float–Carburetor
137	●**557082**	Gasket–Float Bowl
151	**557053**	Stud (Exhaust Manifold)
254	**557079**	Drain–Carburetor Bowl
387	**557033**	Pump–Fuel
436	**557045**	Manifold–Exhaust
536	**557043**	Cleaner–Air
629	**557087**	Spring–Throttle Return
883	★**557047**	Gasket–Exhaust
975	**557008**	Bowl–Float
1059	**557046**	Kit–Screw/Washer
1218	●**557007**	Seal–O Ring (Carburetor)
1233	**557081**	Jet–Needle
1234	**557088**	Cap–Throttle Cable
1250	**557086**	Tube–Emulsion
1317	**557014**	Washer (Exhaust Manifold)

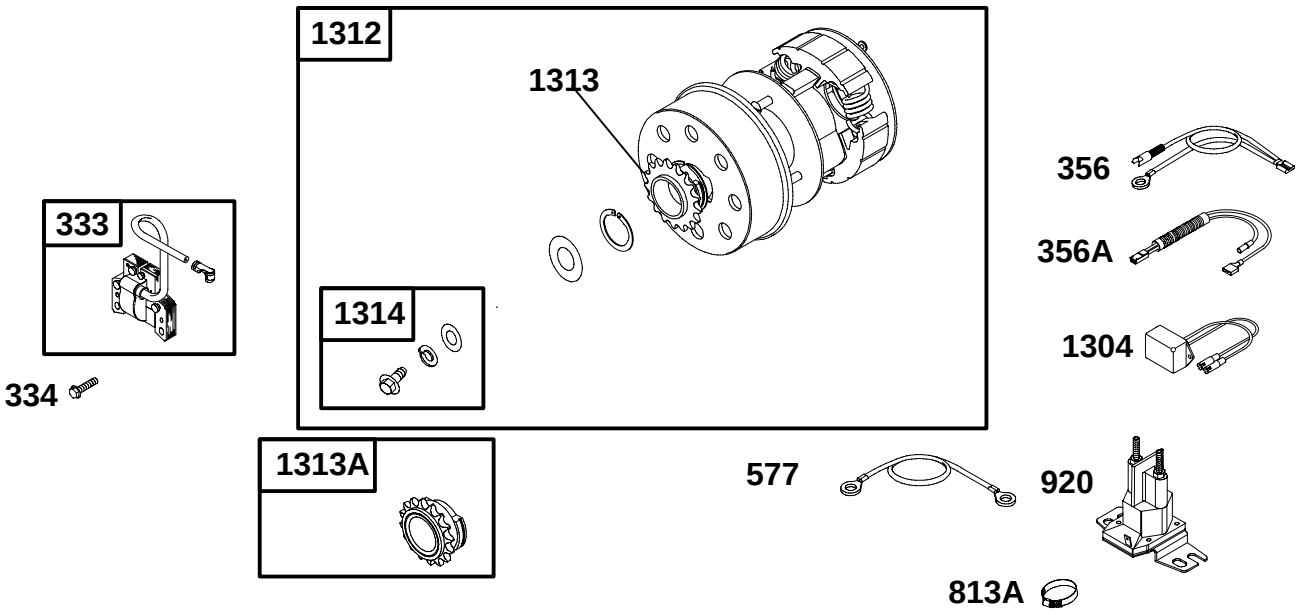
★ Included in Engine Gasket Set–Ref No. 358.
Δ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.

124400



REF. NO.	PART NO.	DESCRIPTION
188	**555538**	Screw (Control Bracket)
222	**555618**	Bracket–Control
347	**555564**	Switch–Rocker
536	**557043**	Cleaner–Air
564	**555571**	Screw (Control Cover)
564A	**557049**	Screw (Control Cover)
575	**557028**	Switch–Starting
604	**557048**	Cover–Control

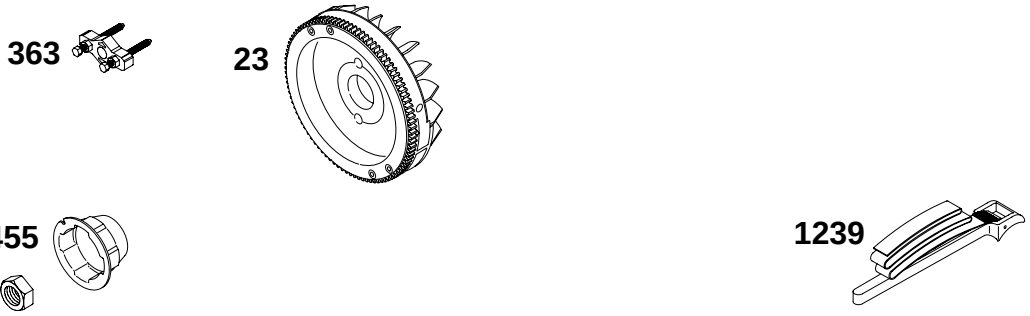
★ Included in Engine Gasket Set–Ref No. 358.
∆ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.



REF. NO.	PART NO.	DESCRIPTION
333	**557040**	Armature–Magneto
334	**555539**	Screw (Magneto Armature)
356	**557031**	Wire–Stop
356A	**557032**	Wire–Stop
577	**555373**	Cable–Starter
813A	**555382**	Clamp (Solenoid Mounting)
920	**557067**	Starter–Solenoid
1304	**557000**	Limiter–Rev
1312	**557023**	Clutch–Centrifugal
1313	**557021**	Gear–Clutch (16 Teeth)(219Chain)
1313A	**557020**	Gear–Clutch (17 Teeth)(219 Chain)
		––––––– Note –––––
		557091 Gear–Clutch (18 Teeth)(219 Chain)
		557092 Gear–Clutch (19 Teeth)(219 Chain)
1314	**557019**	Hardware–Mounting (Centrifical Clutch)

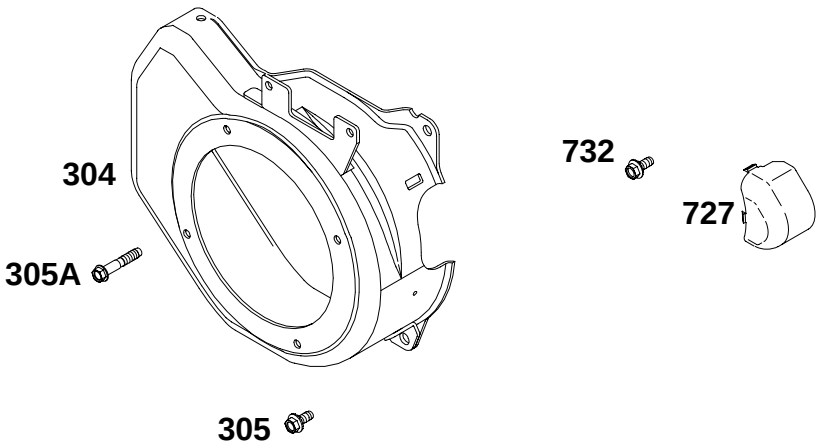
★ Included in Engine Gasket Set–Ref No. 358.
Δ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.

124400



REF. NO.	PART NO.	DESCRIPTION
23	**557030**	Flywheel
332	**555038**	Nut (Flywheel)
363	**19069**	Puller–Flywheel
455	**555518**	Cup–Flywheel
1239	**19433**	Wrench–Flywheel

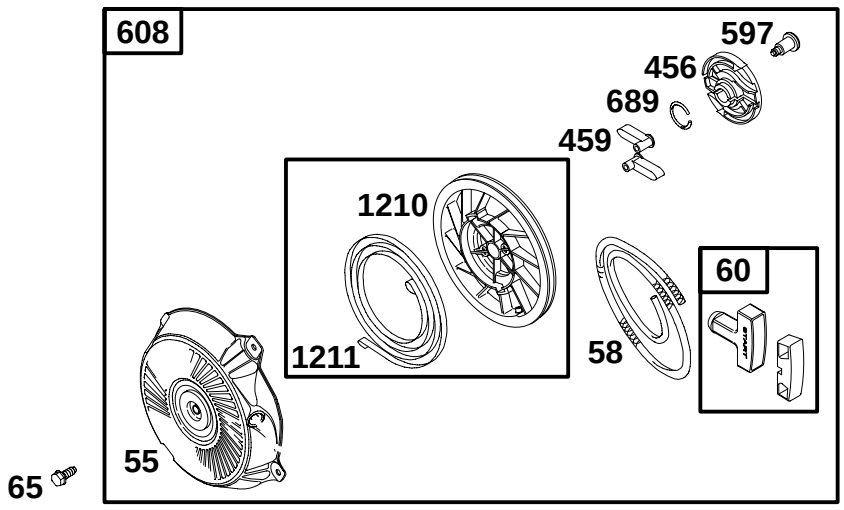
★ Included in Engine Gasket Set–Ref No. 358.
Δ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.



REF. NO.	PART NO.	DESCRIPTION
304	**557034**	Housing–Blower
305	**557036**	Screw (Blower Housing)
305A	**557042**	Screw (Blower Housing)
727	**557065**	Cover–Starter Drive
732	**557064**	Screw (Starter Drive Cover)

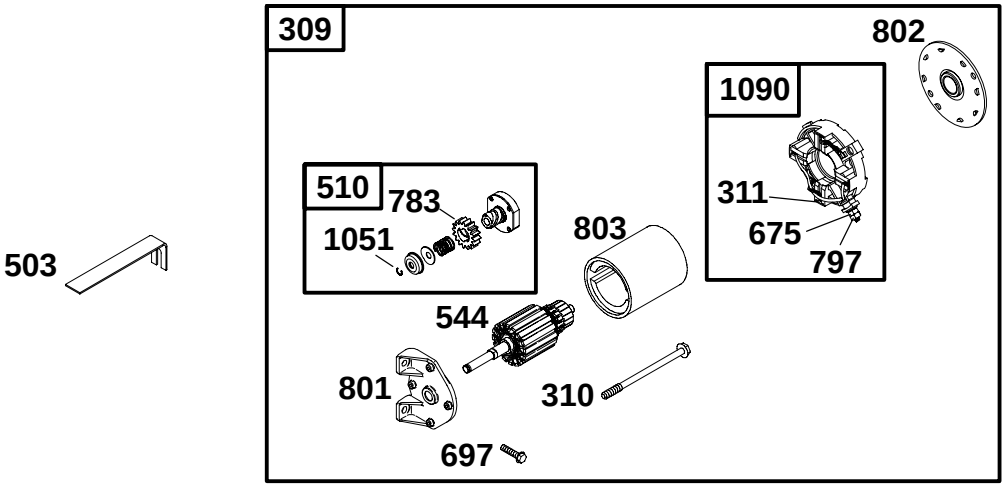
★ Included in Engine Gasket Set–Ref No. 358.
Δ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.

124400



REF. NO.	PART NO.	DESCRIPTION
55	**557060**	Housing–Rewind Starter
58	**557062**	Rope–Starter (Cut to Required Length)
60	**557063**	Grip–Starter Rope
65	**557055**	Screw (Rewind Starter)
456	**557058**	Plate–Pawlm Friction
459	**557059**	Pawl–Ratchet
597	**557061**	Screw (Pawl Friction Plate)
608	**555576**	Starter–Rewind
689	**557057**	Spring–Friction
1210	**557056**	Pulley/Spring Assembly (Pulley)
1211	**557056**	Pulley/Spring Assembly (Spring)

★ Included in Engine Gasket Set–Ref No. 358.
∆ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.

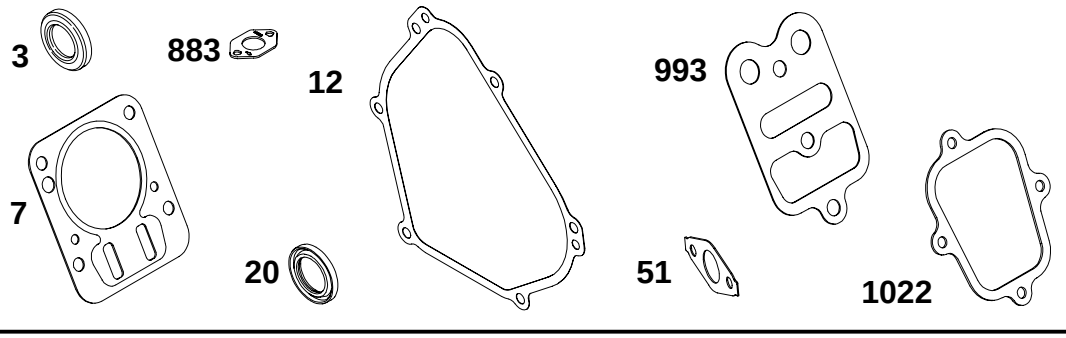


REF. NO.	PART NO.	DESCRIPTION
309	**557068**	Motor–Starter
310	**557077**	Screw (Starter Motor)
311	**497608**	Brush Set
503	**555376**	Strap–Starter
510	**557069**	Drive–Starter
544	**557075**	Starter–Armature
675	**691261**	Washer (Brush Retainer)
697	**557065**	Screw (Starter Motor)
783	**557071**	Gear–Pinion
797	**555380**	Nut (Brush Retainer)
801	**557076**	Cap–Drive
802	**557074**	Cap–End
803	**557072**	Housing–Starter
1051	**557070**	Ring–Retainer
1090	**557073**	Retainer–Brush

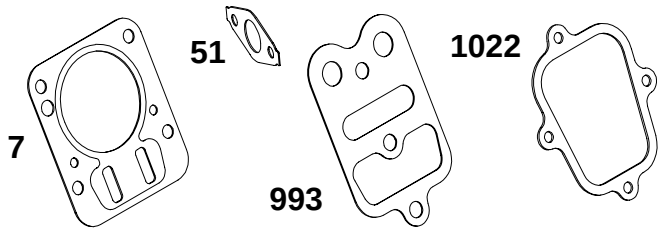
★ Included in Engine Gasket Set–Ref No. 358.
Δ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.

124400

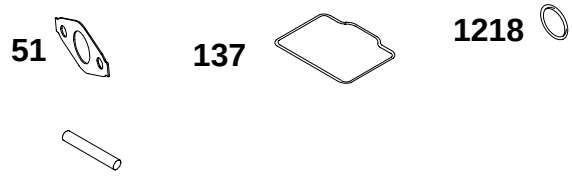
358 ENGINE GASKET SET



1095 VALVE GASKET SET



121 CARBURETOR OVERHAUL KIT



REF. NO.	PART NO.	DESCRIPTION
3	★**555071**	Seal–Oil (Magneto Side)
7	★Δ**555621**	Gasket–Cylinder Head
12	★**555525**	Gasket–Crankcase
20	★**555529**	Seal–Oil (PTO Side)
51	★●Δ**557044**	Gasket–Intake
121	**557089**	Kit–Carburetor Overhaul
137	●**557082**	Gasket–Float Bowl
358	**557090**	Gasket Set–Engine
883	★**557047**	Gasket–Exhaust
993	★Δ**555554**	Gasket–Cylinder Head Plate
1022	★Δ**555523**	Gasket–Rocker Cover
1095	**557027**	Gasket Set–Valve
1218	●**557007**	Seal–O Ring (Carburetor)

★ Included in Engine Gasket Set–Ref No. 358.
Δ Included in Valve Gasket Set–Ref No. 1095.
● Included in Carburetor Overhaul Kit–Ref No. 121.